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VOLUME XXX FEBRUARY, 1931 NUMBER 2

A DECCAN VILLAGE IN INDIA

K. J. G. SUNDARAM
Dornakal Training School, Dornakal,
Hyderabad, India

INTRODUCTION

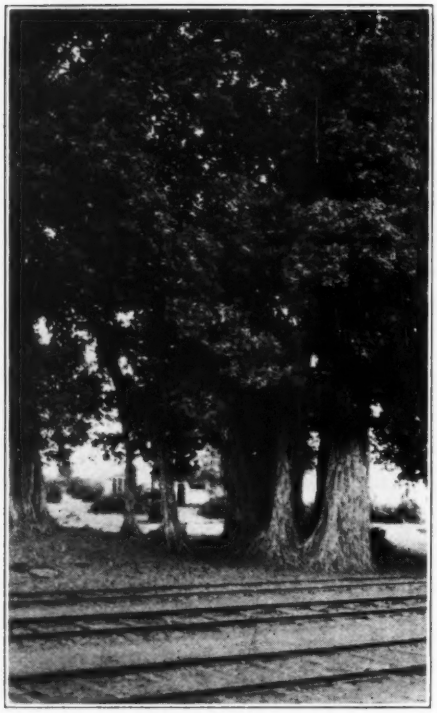
There are about fifteen times as many villages as there are automobiles in India. This statement may seem surprising to my readers in the United States of America where there are more than thirty times as many automobiles as there are villages in India. The 700,000 villages of India are the homes of 90 per cent of the 320,000,000 people of this country. The interpretation of the life of India in geographic terms is therefore largely the interpretation of village life.

For the purpose of this article, a village may be defined as a self-contained, self-supporting unit, located on every two or three square miles of the well inhabited areas of India, with a population of 500 to 5,000, of whom about 70 per cent are farmers. In a vast country like India, geographic conditions vary greatly, but it is hoped that the following study of Dornakal, a village on the Deccan, will give the reader an idea of the relationship between the geographic conditions and the village life of India in general.

Dornakal is a small village in the Hyderabad Dominions located at 17° 40′ N.L. and 80° 16′ E.L. Like the names of many villages of India, the name Dornakal has some geographic significance. The word Dornakal means "a group of stones" and this meaning is applicable to the immediate locality. The word "stone," or its equivalent, is used in more than a dozen forms in the naming of the villages of the Deccan plateau.

INFLUENCE OF LOCATION

Dornakal is located on the slopes of a rock region thru which a small river flows. The stream has its source about 40 miles



Upper left: Railway and native Forest Trees, Dornakal, India
Upper right: A street scene. The village barber in action
Lower left: River and rocky bank. Natives doing laundry work
Lower right: An ox-team drawing water from a well for irrigation

north of the village. It is the overflow of a big "natural tank" or lake, which has an area of 24 square miles. Dornakal proper was founded some hundreds of years ago, but the new Dornakal and its extension came into prominence about forty years ago with the advent of the railway and the mission. One main line of the railroad crosses India from Madras on the Bay of Bengal to Bombay on the Arabian Sea. Another line joins this one about midway between Madras and Bombay and extends eastward across the Deccan. Dornakal is on this second line about 200 miles from the Madras-Bombay route. Forty years ago Dornakal was located in a forested region where tigers were common. During this period of four decades the village increased in population from a small village of 500 to a town-like village of 3,000. The main factors in its growth have been its position on the main railway route to important towns; the timber of the forests; the resources of coal fields near the village; and the activities of a Christian mission, with its school for vocational training.

INFLUENCE OF LAND FEATURES

The surface of the land is rugged and uneven, varying in elevation 5 to 20 feet in short distances. This rocky, rugged surface makes it difficult for the farmer to control the land for his benefit. The low-lying strips of land between the higher lands are more useful to him because of their adaptability for wet cultivation of rice. In such areas, small "tanks" are built to catch and reserve rainwater with which the adjoining rice fields are irrigated. The presence of such tanks and lakes around the village has greatly increased the prevalence of malaria. These water bodies are the homes of mosquitoes found abundantly in this locality. During the rainy and cold seasons nearly half the people of the village are unfit to attend to their agricultural and industrial operations because of malarial attacks.

Numerous wells are also to be seen in and around the village for the purpose of irrigation. Water is here found at a depth of 20 to 30 feet, while, in many parts of the Deccan, wells are dug to a depth of 40 to 60 feet to obtain a satisfactory water supply.

The higher and drier land, which includes nine-tenths of the cultivated area, is used for growing the dry crops, especially millets, pulses, and oil-seeds. About ten different kinds of grains are grown in the village area.

The dry soil is red in color and rocky; it is not inherently rich, but it is a fresh and new soil which was occupied by forests until recently. The forests were cleared for cultivation by a hill tribe called the Lambadees. Because of the newness of the soil, the farmers have taken little trouble to maintain its fertility by manure or other fertilizer.

WOMEN OF THE LAMBADEE TRIBE

The river, tho near, runs very rapidly among the rocks and stones. Public and private enterprise is needed to turn its swift waters into useful channels.

Stones, gravel, and brick clay used in the construction of buildings and roads are obtainable in abundance in the locality, but the cost of transportation is so heavy that only the rich can afford these materials for building purposes.

INFLUENCE OF TEMPERATURE AND RAINFALL

Dornakal is in the tropical zone about 400 miles south of the Tropic of Cancer. Its altitude is less than 1,000 feet above sea level, and it is about 150 miles from the sea. The maximum temperatures for summer are between 110° and 115° F. The maximum winter temperatures are between 88° and 91° and the coldest nights in December have temperatures between 50° and 60°. For about four months in the year —March, April, May, and June, the heat of the summer is so intense that outdoor work is very difficult for the hatless Indian. The farmer is doing odd jobs during this period preparatory to the growing season which comes with the monsoon rains. During these months he spends much time attending marriages, performing ceremonies, pilgrimages, and taking part in festivals.

While the clothes of the people are excellent for summer wear, they are unsuitable for the cold season, hence the ill-clad villager has a fire made of logs for comfort during the cold nights whether in the house or in the field. In the summer, the people are physically incompetent for hard labor because of the intense heat; in winter they are not capable of hard work because a dozen types of illness prevail. This explains, at least in part, why the average villager's economic condition is very poor.

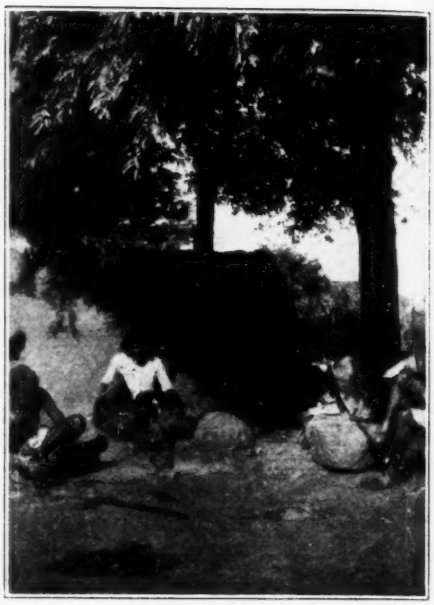
The incoming and returning monsoons give Dornakal an average annual rainfall of about 40 inches, nearly all falling during the months of June, July, August, September, and October. New York receives about the same annual rainfall and would not be inconvenienced if the average was somewhat less. Dornakal, however would almost perish without this quantity. A total rainfall of 40 inches is almost sufficient for the fields, if it is timely and occasional. It must be remembered that the farmer of this region does not need a heavy shower as much as a timely shower. Sixty-five per cent of the people of Dornakal live directly by agriculture, hence the amount and distribution of rain during the growing season is of utmost importance to the villager. The crops will live only if there is rain. Failure of rains is very common, and the consequent failure of crops is frequent. This region would have experienced the pinch of famine many a time, except for the railway and its facilities for moving food supplies from regions of good crops to regions of poor crops. Perhaps this absolute dependence on rain, which he thinks is sent directly by God from heaven, is one reason why the farmer is very religious. He has many religious ceremonies, intended, in a good spirit, to control geographic influences.

WOMEN CARRYING BUNDLES OF RICE FROM THE FIELD

PRINCIPAL RESOURCES

Jowar, or cholum—a small round and yellow grain—is grown more extensively in Dornakal than any other crop. This is the main crop of the table-land and it forms the chief food of the villager. Other cereals such as "cumbu" and Indian corn are also grown for local consumption. Pulses of eight different kinds are cultivated in the locality. Rice, which is the main food crop of India, is not grown on the Deccan as extensively as cholum.

The fact that there are ten vegetable gardens in Dornakal is exceptional in a Deccan village. This is a response to the needs of the railway and mission people who use more vegetables than the



Upper left: A Village Hut
Upper right: The Village Blacksmith at Work
Lower left: The Village Potter Puts on the Finishing Touches
Lower right: Basket Making, a Home Industry

villagers. Two large orchards where mango, the favorite fruit of the Indian, and limes of various kinds are grown, supply fruit to the locality. It is interesting to note that several foreign varieties of fruits and vegetable plants have been tried, but unsuccessfully, in these gardens.

Cholum which constitutes the major part of the villager's bread food is very nutritious, being second only to wheat in food value; hence the Deccan villager is stronger than his rice-eating brother of Southern India. Cholum is cooked separately or made into porridge or bread. A simple curry of pulses and spices, often with buttermilk added to it, forms a monotonous diet of the people.

Rice is a luxury and it is used only on festive occasions or when meat is available. On the occasion of a wedding, it is the custom of the bridal party to feed all the villagers of their allied caste, and rice is invariably used. It is noticeable that the number of marriages in the village increase or decrease according to the yield of the rice crop of the year.

Unfortunately the food value of vegetables is not realized by the villager. He neither grows vegetables for his own use, nor can he buy them. A medical authority writes: "The common ailments to which these people are very prone will be greatly reduced, if they learn to use vegetables freely in their diet."

Livestock contributes greatly to the wealth of the villagers. Almost every home raises cows, buffaloes, swine, and poultry. The shepherds keep large flocks of sheep and goats. The horse is not common on the Deccan. Considerable income is obtained by the sale of animals in and around the village. It is interesting to note that because of religious scruples the pork-eaters are looked upon with contempt by the Mohammedans and the beef-eaters are similarly regarded by the high caste Hindus.

The forest products add considerably to the livelihood of the villager. Teak, other timber, and firewood are obtained from the surrounding forests at low cost. The resources of the forest, together with the local supply of building stone and clay for brick and tile reduce in many ways the problem of building a strong house, but the cost of local transportation of these heavy materials is very high. The average villager lives in a small and simple house, the walls of which are made of clay and the roof covered with grasses grown in the field or forest.

The coal fields of this region are 15 miles from Dornakal. They

produce 650,000 tons of coal annually, 3 per cent of the coal production of India. Some of the adventurous young men and women of the village work in the collieries and earn good wages, but there are people who have spent long lives in the village and have never seen the coal mines.

CONVEYANCES

Before the coming of the railway, the village cart was the only means of transportation. A simple wooden mechanism, it has been used from time immemorial. There are cart roads in all directions from the village. Transportation by cart is ten times as costly, perhaps ten times as inconvenient, and fifteen times slower than the train. The cart stands as a token of the eternal patience of the Indian. The ordinary cart used for goods, with a top added for protection from the sun, is used also for passengers.

NATIVE INDIAN CARTS

The Palanquin is a wooden framework with couches for one or two persons. It is used only by the wealthy, as it must be carried by four or six men.

Dornakal lies on the main railway leading to important cities. It is near important timber areas and coal fields. Dornakal itself does not possess a temple, but it is serving as a gateway to the great temple which is visited by thousands of Pilgrims every year. It became a railway station forty years ago, and during this period its population has increased nearly sixfold. A railway center in India means a meeting place of different races, languages, and creeds. In this small village there are nine different races of people who profess six different kinds of religions and speak thirteen different languages—a miniature representation of India!

The railway, which changes considerably every village that it reaches, has not only helped the growth of Dornakal and its civilization, but it has greatly reduced the occurrence of famine, and the cost of things foreign to the village. Incidentally, the railway has done much indirectly to remove "untouchability" and caste.

COMMERCE AND INDUSTRY

Coal and timber exports pass thru this village. During the harvest season, wholesale traders buy grains, pulses, and castor-oil seeds in Dornakal and surrounding villages and ship them from Dornakal to distant markets. There is also considerable trade in skins, bones, and fruits. Rice, kerosene, salt, and other articles are imported in considerable quantities to supply Dornakal and surrounding villages.

As for industries, there are neither factories nor mills, except the railway workshop, but the village abounds in "home industries." As in every other village in India, weaving, carpentry, pottery, brick-making, basket-work, black-smithing, and shoe-making are all developed, on a small scale, to fulfill the demands of the village.

The growing activities of the railway and the church mission—the two factors to which the village of Dornakal largely owes its growth—indicate that it will soon reach the rank of a town.

REFERENCE MATERIAL ON INDIA

India is one of the most fascinating countries of the world to study, whether that study be given a geographic, economic, political, or social emphasis. For many months every daily newspaper has carried some news item concerning India, and the world has watched the London Conference as it endeavored to settle some of the perplexing problems concerning India and the British Empire. Mr. Sundaram's article, which appears in this issue, presents many of the details of a village community. In the belief that our readers will be interested in the study of India more fully, we have asked the British Library of Information, 551 Fifth Avenue, New York City, to compile for us a bibliography that would be of general interest. This they very kindly consented to do. These references may be consulted in that Library, or the Library is ready to assist those who desire to study India or other parts of the British Empire. For the convenience of our readers we have asked the Library to give the names of the publishers, and so far as possible, the prices of the various publications. Those marked with an asterisk may be obtained from the British Library of Information. Where prices are given postage is extra.

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GEOGRAPHY FIELD WORK WITH JUNIOR HIGH SCHOOL PUPILS[1]

EDNA E. EISEN
Steuben Junior High School, Milwaukee, Wisconsin

Since the field is the geographer's laboratory it was felt that boys and girls in junior high schools could do field work at their level from which they could secure satisfaction and worth while geographic experiences. Club work forms an important part of the activities in junior high schools, so it seemed possible thru a geography club to try an experiment in urban field study in Milwaukee. With this purpose, boys and girls interested in organizing a geography club were invited to attend an initial meeting.

Plans for the work of the club were discussed at this meeting. It was suggested to the boys and girls that they might become better acquainted with their own city, not merely thru a study of maps, pictures, and reading material, as was the necessary procedure in their study of other cities; but by actually seeing for themselves how the lands and waters of the city are being used, and by trying to find why they are being used in the ways they are. It was suggested, also, that the children might make a map showing various uses of land in the city, since no such map was available and since it would be of use in the study. These ideas appealed to the boys and girls as a program they would like to undertake.

Three kinds of club activities developed from the plan. First, group field trips were conducted on one Saturday each month to various sections of the city to observe some of the outstanding activities carried on in the community. Second, there was the making of a land utilization map of the city. Much of this work was done by the pupils working individually or in pairs. Third, the club meetings, at which questions relating to the other club activities were discussed, were held twice each month at school at a convenient time.[2]

Membership in the club was limited to the first fifty pupils to

[1] An account of an experiment carried out by the writer with seventh and eighth grade pupils in Steuben Junior High School, Milwaukee.

[2] The school program does not provide a special club period as is the plan in many junior high schools. The meetings were held during the noon recess, from 12:15 to 12:45, which was not very satisfactory, but the best which could be arranged.

signify their intention to take part in all the club's activities for the entire semester. Since many boys and girls had lessons and other regular engagements on Saturday, it was agreed to alternate the time of the trips, having one trip in the morning and the next in the afternoon. By this arrangement it was possible to take in as many as fifty members, for it meant that there would be about twenty-five members to go on each trip. It was felt that this was about the maximum number that one teacher can conduct comfortably and profitably. A fine group of boys and girls, anxious to become better acquainted with their city and eager to make a map contribution joined the club. Thus, as an extra-curricular activity, it was possible to carry out what proved to be a very interesting experiment.[3]

MAPPING OF LAND UTILIZATION

The scheme to be used in mapping land utilization was discussed at the first regular meeting. The various uses of land in the city, such as houses, flats, apartment buildings, hotels, grocery stores, meat markets, department stores, office buildings, garages, theatres, foundries, factories, schools, churches, golf courses, parks, and others were mentioned by the boys and girls. It would be too complicated a map and very impracticable to attempt to show each of these very specific uses of city land on the base map which was a street map of the city to the scale of 1:14400 or 4.4 inches to the mile. The task of making the map would be fairly simple, however, if these many specific uses could be grouped into five or six classes or types of land utilization found in the city. Houses, flats, apartment buildings belong to the *residential* group which it was agreed should be indicated on the map in orange. The various kinds of stores and all the places that sell services were classed as *commercial* and were to be colored red on the map. Coal and lumber yards, grain elevators, warehouses, and other specific commercial uses were added to this type when found by the children. Machine shops, foundries, and factories belong to the *manufactural* group and were to be designated by purple. Yellow was chosen to indicate schools, libraries, churches, hospitals, and other uses which were considered *social*. Parks, playgrounds, golf courses, and other

[3] Another club was organized at the same time in the Roosevelt Junior High School where the work was under the direction of Miss Christine Hahn. The two clubs joined on the field trips and carried out similar programs.

recreational uses were to be in green. Street car lines were to be indicated by solid red lines, railroads by broken red lines. It was agreed to leave areas of idle land uncolored.

Each child listed on the inside cover of his notebook the five major uses of land and the colors to be used to designate each type of use. All then had the map legend which would be used for all the work. It was decided to devote one page of the notebook to each one of the five major types of land uses and to list the specific uses found which belong to the major class indicated. This provided a check on each child's mapping. A sixth page in the notebook was headed "puzzling cases" in which to list uses of land for which the child was undecided as to proper classification. These questionable cases were to be brought up for discussion at club meetings.

The children were anxious to get started at this new experience in mapping. Each child made a drawing of a city block, indicating both sides of the street. The north-south distance was drawn longer than the east-west distance, but no attention was given to scale of miles. The entire group went out together to map both sides of the streets in the block just opposite the school. On the trip around that block, three of the major types of land uses were noted, residential, social, and commercial and some vacant land. The question arose immediately as to how to take care of the fact that there were two houses along a street all the rest of which was in stores. Should each individual building be mapped? That would not be practicable. It was decided to map that particular block as commercial, since that was the dominant use, and to follow that procedure in all similar cases. It also was decided that unless more than half of a block were vacant no attention would be given to idle land and the block would be mapped according to the dominant use. This experience was helpful in understanding that maps show generalizations.

Assignments for individual mapping were made from the base map of the city. Each child was given a small area of three or four blocks in the vicinity of the school where the street pattern is very regular and so there was no difficulty in making a satisfactory working map. In order to have a check on the work the same area was given in each case to two members. When a child completed his assignment he turned in his map to a committee that checked the maps and transferred the data to the base map. As

soon as a child completed one assignment satisfactorily he took a new area, usually a little larger than the previous one had been. If the street pattern of an area was rather irregular the children made certain of their working maps from the base map before attempting to do their field mapping. Before the unpleasant winter weather the entire area within walking distance of the school had been mapped. Small areas in other parts of the city had been mapped by children when they went into other neighborhoods for week-end visits. The two clubs exchanged working maps, so that each club might have the benefit of the work of the other.

FIELD TRIPS

The purpose of the field trips was to familiarize the boys and girls with the important commercial and manufactural activities of the city; to learn what activities of these classes are carried on in the city, to see how they are carried on, and to try to find reasons why they are carried on where they are and in the ways they are.

Plans for the field trips were discussed at the second regular meeting. It was evident that the entire group were absolutely unacquainted with the port activities of Milwaukee, altho all were aware of the fact that the city is an important lake port. Therefore, it was planned to have several trips, so arranged that the children would understand the activities and layout of the port of Milwaukee. Each child was given a map of the city, a Street Railway Guide, furnished by the Electric Company.

The first trip was to be to the harbor entrance. Its location was found on the map and the route to be followed was pointed out. Each child copied a sketch map of the street pattern of the area to be traversed, so that section could be mapped and added to our land utilization map of the city after the trip. The children were urged to make note of specific uses of land which they saw. Preceding each trip a similar meeting was held so that the children never started out without being somewhat prepared for the trip.

The route followed on the first trip was along the downtown retail store district, into the wholesale and jobbing sections, past establishments carrying on light manufacturing and finally to the warehouses and storage plants near the harbor entrance. The boys and girls were keen to note the changes in land utilization as they walked along. The municipal airport was visited and the chil-

dren's attention was called to the fact that this large area of newly-made land, not far from the commercial center of the city, was a good site for an airport. The children were taken out along the breakwater to the old lighthouse at the entrance to the harbor. Here the boys and girls had their first close view of one of the typical lake carriers as it was being towed into port (Fig. 1). Great was the children's excitement when they learned that this huge boat was bringing to coal-less Wisconsin anthracite which had been sent by rail from the mines in eastern Pennsylvania to a Lake Erie

FIG. 1. A typical lake carrier entering Milwaukee Harbor.

port and there had been transferred to this carrier for shipment on the Great Lakes. The children saw the great piles of coal and the unloading apparatus across the river (Fig. 2) and wondered if this boat was to be unloaded there too. The boat was followed to where the Kinnickinnic River joins the combined Menomonee and Milwaukee Rivers (previously pointed out on the map) and make the harbor entrance. It is partly because of the natural advantage afforded by these rivers that Milwaukee's port has been developed. The carrier did not dock here, but turned up the Milwaukee River and on into the Menomonee. At the bridge over the Menomonee River the children were able to see the open bins of this coal boat (Fig. 3) and to note how the various sizes of coal are separated, each size being in a bin by itself. As the boat turned to go up the Menomonee River the children were amazed to see this huge lake carrier get thru such a narrow river passageway. It was impossible to follow this coal boat to the coal docks and yards

where it was to be unloaded, but that was to be the goal on a future trip.

On the traverse to the harbor entrance the first street east of the Milwaukee River had been taken. On the return traverse the west side of the river was taken, noting as before the various uses of land, giving special attention to the work in connection with steamboat terminal buildings and warehouses, noting what and how

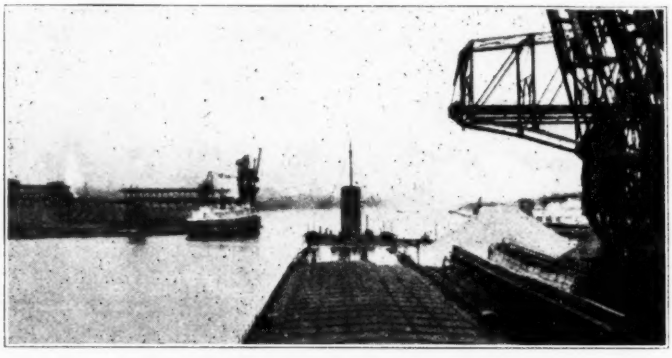

FIG. 2. Coaling operations along the Kinnickinnic waterfront.

package freight is handled. One of the Pere Marquette Line boats, a passenger and freight carrier, was in dock. The boys and girls learned that these boats cross Lake Michigan between Milwaukee and Ludington every day thruout the year carrying passengers and freight of various kinds in both directions, and that during July and August fruit from Michigan is an important item brought into Milwaukee by this route.

Other trips furnished more concepts concerning the port of Milwaukee and its layout and gave the boys and girls other new geographic experiences. One trip to the upper Kinnickinnic River district at the south end of Milwaukee's inner harbor, furnished a great many new ideas. The goal on this trip was the carferry docks. While on the street car the children noticed that they were going thru a manufacturing district. On the traverse various kinds of factories were noted. One of the items of interest was not the use, but the lack of use of a considerable area. Here was the wreckage of smelters of a former iron and steel industry. The children were told that Milwaukee formerly had had iron and steel smelters and the children saw that these places had been located favorably on the river where boats bringing iron ore and coal could dock. They

were told that the development of a very large scale iron and steel industry in the Chicago district at the southern end of Lake Michigan, where iron ore brought by water and coal largely brought by rail could be assembled relatively easily and where large areas of level land for plants were available, helped to account for this change in Milwaukee's industries. At present the factories of Milwaukee receive pig iron, steel, ingots, etc. from the iron and steel

FIG. 3. A coal boat being towed up the Milwaukee River.

centers for manufacturing in their plants the many articles using these raw materials. (At a meeting the means of transporting these raw materials were discussed.)

The children did not know how carferries differed from other boats which they had seen out on the lake and they did not know how carferries operated, so the boys and girls were taken thru the carferry in dock before the cars were put on. Then they watched the boat being loaded with twenty-five or thirty freight cars. They learned that part of the cargo consisted of meat for Detroit. The children were told that these carferries, which operate thruout the year, summer and winter, are of vast importance to Milwaukee industries, as they represent the main factor in keeping Milwaukee on the Chicago basis of rates to and from Eastern ports. Trains using the carferry route avoid the congestion in the Chicago district and so there is a saving of both time and money. These monster craft in daily service between Milwaukee and Michigan ports handle between twenty-five and thirty per cent of the total lake commerce of Milwaukee.

After watching the carferry steam down the river the children were conducted to the large grain elevators (Fig. 4) located on another slip in the Kinnickinnic River. It was fortunate to arrive there while a huge lake carrier was being loaded with corn. The children saw the rear of the elevators where the trains bring in the corn and other grain; they saw how the grain is handled and stored in the elevator; and they saw the corn being shot into the great hold of the boat. Their attention was called to the location of the elevator where rail and water transportation meet. Permission was received to come on to the boat. The dust and dirt

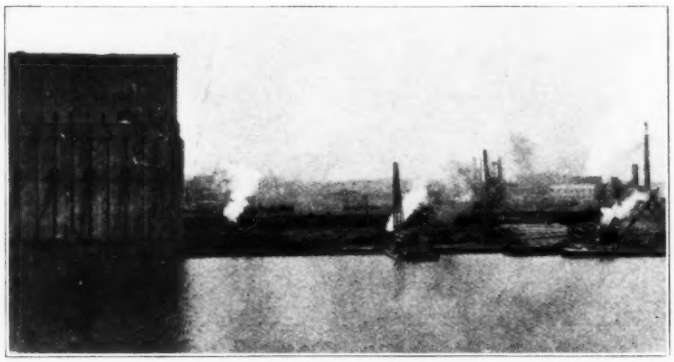

FIG. 4. A grain elevator at the south end of the inner harbor.

which made the work of the men very difficult helped the children to appreciate some of the hardships of this way of making a living. They learned that the corn they saw being loaded had been shipped to Milwaukee in bulk by rail from Iowa and that this boat would carry it down the Great Lakes to Buffalo where it was to be used in the manufacture of various corn products. (Milwaukee's grain trade was the subject for discussion at a club meeting.)

Another trip was conducted to the Menomonee Valley coal district. From the viaduct the children surveyed the area. The yards and docks were piled high with coal of various kinds and sizes and in the canals and slips were six or eight lake carriers left to winter there, as this was after the close of navigation on the Great Lakes. The railroad yards, factories, gas tanks, and other forms of occupance were noted before taking the children under the viaduct to see the unloading bridge in operation. It was a very cold day and so it seemed best to change the plans somewhat and visit the plant of the Milwaukee Coke and Gas Company which is located

in the valley. It was interesting to learn that the coking coal was brought in the huge lake carriers, while the steam coal used under the boilers was bought at a very low price at the Illinois mines and received at the plant by rail. Retort ovens are used in this plant and the children learned how by this method many by-products are saved which are lost in the bee-hive ovens which had been noted on a previous trip.

Another trip was started from the top of the reservoir hill from which a reconnaissance was made of the upper Milwaukee River valley and the area between it and Lake Michigan. The children

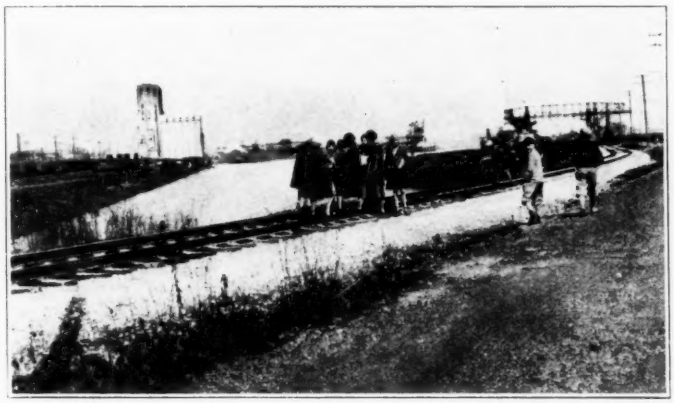

FIG. 5. A view of port activities from the south end of "Jones Island."

noted that the latter is chiefly a residential district, but that there are some signs of both manufacturing and commerce in the landscape. They saw that the manufacturing establishments are located near the river and along the railroad, and that the latter follows along the river. The children could tell that the finest types of residences are those that are near the lake and farther from the river and railroad. The almost level character of the land was noted as one of the reasons for the very regular street pattern of the area.

After this survey of the upper Milwaukee River attention was concentrated on the section of the river below which is used commercially. The purpose of the traverse from the upper limits that lake carriers can reach to the heart of the city was to complete the pattern of the inner harbor and its uses. As on other trips the children noted the various occupance forms; the coal docks and coal yards at which trucks were being loaded, the tanneries which

flank the river, the large lumber yard and planing mill, factories carrying on various kinds of light manufacturing, and storage plants. This trip ended at the wreckage of the city's last flour mill. Milwaukee had, at one time, a number of important flour mills; today practically no flour is manufactured in the city. (At club meeting some of the reasons for this change were discussed.)

Other trips of a similar nature were conducted. One was to Jones Island (Fig. 5) so the children could better understand the

FIG. 6. The upper limits of commercial utilization of the Milwaukee River.

proposed outer harbor project. The children were told of the plans of the project and saw that if such a plan were carried out it would necessitate a great expense and they raised the problem, which of course they were not able to solve, as to the advisability of the plan. They realized that it would be necessary for experts to determine whether the traffic would warrant the expense. Another trip started from the dam (Fig. 6) which was built to make possible the commercial utilization of the Milwaukee River up to that point. Various recreational uses were noted on the traverse up to the shallow waters of the upper river where the outcropping of the rock formation and the river bluffs help to make this an attractive section of the river (Fig. 7).

CLUB MEETINGS

The purpose of the club meetings was to provide opportunity for discussion and to give to those boys and girls who were unable

to go on a certain trip the benefit of the others' experiences on that occasion.

Difficulties in classification which were met in mapping work were discussed. For example, should land occupied by a lumber company, consisting both of lumber yards and planing mill be considered a commercial or a manufactural use? It was arbitrarily agreed to call lumber yards commercial use. As the map grew the question arose of the difference between retail stores which plainly

FIG. 7. A typical group of pupils enjoying the beauties along the upper Milwaukee River.

serve adjacent residential districts and the large commercial sections.

Informal reports of the trips constituted an interesting part of the meetings. One or two of the children would tell of what they had seen trying to explain to the others the geographical aspects of the trip and answering questions which their audience would ask.

The children brought in news items and pictures which they thought would be helpful in gaining the understandings in which the club was interested. The clippings were posted on the bulletin board and later assembled in the club scrap book.

In the New Year's edition of the newspapers statistics of all industries in Milwaukee are published. These data were used as the basis for several interesting meetings during the winter. The specific industries of each of the industrial groups listed were investigated and the children tried to find some of the reasons

why these industries are carried on in Milwaukee. From the telephone directory and other sources the children found the location of the plants and marked them on the utilization map if not already indicated. These locations were discussed in relation to the railroads and to the waterways in the city.

CONCLUSION

If children's interest and enthusiasm may be considered any criterion, this experiment was a success. It is the writer's belief, moreover, that the club members did gain some worth while geographic understandings. These boys and girls got certain ideas about Milwaukee as a whole. They gained some understanding of the relation of the shape, street pattern, and land utilization pattern of Milwaukee to the site of the city. They saw how the various parts of the city fit together in the city structure with its terminal buildings, warehouses, manufactural and wholesale establishments along the lower courses of the rivers and along the railroad lines, with its chief commercial section in the center of the city, surrounded by the wholesale (also commercial) and light manufacturing districts, and with the residential, recreational, and social districts bordering these, and with some of the heavier manufacturing establishments at the outer edges of the growing city not near the lake. From their study these children appreciate certain problems of use and they realize the magnitude of some of these problems which the average citizen is so likely to attempt to solve from a priori reasoning. Interpretation of land utilization was limited to the simpler relationships, such as the relation of the highest type of residential districts and nearness to the lake and park, and the relation of warehouses and elevators to location along the lower rivers, etc. They gained some understandings of Milwaukee in its relation to other areas. In addition, the concepts of such cultural features as warehouses, elevators, boats of various types, docks and dockage equipment, and others were so new to most of the children that, indirectly, this field work helped these children in understanding certain activities in other cities.

This type of work, not merely as an extra-curricular activity, but as a definite unit of work for junior high school pupils, seems feasible. After the pupils have gained understandings of the geographic personalities of the major regions of the world, followed by a world review in which the relation of the world political pattern,

world population pattern, world work pattern, and natural environment is seen, and after a study of the United States with some of its external relations, boys and girls would benefit from a rather intensive local study of the type carried out in this experiment. It is the writer's opinion that pupils with such a background could do more in the interpretation than the boys and girls in the club were able to do. This is the kind of work, rich in pupil activity, which appeals to boys and girls of junior high school age.

THE INTERMEDIATE GRADE GEOGRAPHY TEXT AND THE LABORATORY METHOD OF USING IT

SELMA ABRAMS
New Orleans Normal School

THE USE OF THE TEXT: A PROBLEM OF THE INTERMEDIATE GRADES

In the earliest school years, many children study geography without a textbook. Observation and excursion work are used to a large extent, or the teacher tells geography stories illustrated with pictures and located on the globe.

In the fourth grade, usually, serious geography study of a more formal type is begun. Children promoted from this study must have a working knowledge of geographic facts and principles. Moreover, they must know how to use a textbook in answering simple questions of a geographic nature. Because of these two definite and necessary objectives, so different from those of the lower grades, the intermediate grade teacher finds the geography work difficult.

In these days of vigorous educational growth, we hear much talk of broadened educational objectives, of socialized recitations, of project and problem methods; until some classroom veteran rises and says, "Teach the children what is in the textbook. All modern textbooks are good; so by following the text, you cannot go far wrong."

To a certain extent this is true. We have all had the experience of having children go to the map and fumble hopelessly in locating their own city; hesitate over the naming of such fundamental facts as the principal rivers and indentations of their own continent. And we agree: "Teach them the facts in the text." But how?

Shall we assign paragraphs in order from the text, then have recitations and drills on the paragraphs studied? A dry, uninteresting procedure, but perhaps worth while if it did result in a knowledge of important geographic facts and in an ability to use the book in finding the answers to questions of a geographic nature.

DISADVANTAGES OF "FOLLOWING THE TEXT"

But this would be a wasteful procedure; for all the facts in even a good geography text are not equally important for all the children of the United States for whom the text was written. Wasteful too, because many geographic facts written a few years ago are not important or true today. Also, to submerge the child's interest and the teacher's personality, to overlook the geographic opportunities offered by current events, would certainly tend to make both teacher and pupil the slave rather than the master of the text.

Moreover, a child who knows facts in the text may not be able to use these facts in the solution of everyday problems and in the enjoyment and understanding of life situations: a child who is able to name the capitals of the states of the Union, to locate Cape Finestre and the Gallapagos Islands, may not be able to tell why New Orleans is the logical site for a sugar refinery, or why New York can supply work for millions of people. Above all, he may not be able to use the text to find the answers to such ordinary questions. And so the problem remains for the intermediate grade teacher: How can the geography text be used to teach facts and principles? How can children be taught to use the text in answering everyday fact questions of a geographic nature?

"MOTIVATED READING" AS A TEXTBOOK METHOD

The commonest method of using the geography textbook is the ordinary reading method. The teacher chooses a paragraph or section from the text, determines upon a half dozen or so reading difficulties. In the approach of the lesson she removes these difficulties thru references to old lessons or to past experiences. She writes difficult words and phrases on the board, and refers the children to those pictures and maps in the text that will clear away the anticipated difficulties. After the paragraph has been motivated, the children read it purposefully: to find the answers to cer-

tain definite questions. While the children are reading, the teacher gives help to individuals. At the end of the reading period, the children reproduce the paragraph and answer the motivating questions. There follows the assignment of the same or of another paragraph from the text for further study.

This is a good method to use occasionally: it gives the child reading ability; in fact a busy teacher may sometimes convert the geography period into a reading period. Children, taught by this method, may indeed acquire a large number of facts. But the reading method does not result in a knowledge of real geography, for geography is a body of principles, of concrete illustrations of cause and effect. It does not result in children knowing how to study geography, for geography study in the intermediate grades is a straight inductive thought process. It results only as the teacher intended: in a knowledge of facts, and in an ability to reproduce facts from a printed page, valuable results in themselves, but neither real geography nor real teaching.

The Text is a Tool of Learning

It is better that children should know fewer facts, pass poorer examinations on the facts of a text; it is better instead that they should know how to find and observe facts, analyze and compare them, make inferences, draw conclusions, test and apply these conclusions; for we are teachers of children, not teachers of facts. The text is only a tool for educating children, but it is our strongest tool.

The geography text is different from every other text. It contains numbers of pictures with titles and questions. These pictures are not only for enjoyment: they are to be consistently and consciously analyzed and studied. They are as much a part of the text as the paragraphs themselves, for why talk or write or read about a farm, a mine, a factory, when you can see a picture of the thing itself? It contains numbers of maps that show the distribution of almost every conceivable physical condition. So why talk or read or write about where conditions exist when the map shows it so concretely? It contains charts, grafs, tables that give at a glance facts that it would take minutes to present orally. As a tool of learning, the geography book is without a rival in elementary education. It is a kind of laboratory manual, a guide to self discovery.

Being so different, the geography text requires a technique different from that used with other texts. Let us illustrate the use of the geography text by choosing a definite topic usually studied by intermediate grade children: "Agriculture in the Middle Atlantic States."

ILLUSTRATIVE LESSON ON USE OF TEXT: MOTIVATING A PROBLEM

We approach the subject by recalling the child's own foods (meat, fish, fruit, vegetables, canned and dried foods, milk, etc.) and how obtained (thru stores and markets, from nearby farms and distant places, by road, rail or boat). We recall the children's experiences on farms, the needs of farmers for rain, sun, good roads, and markets. We then refer the children to the index in the text to find, by comparison, how many more people live in New York City and the Middle Atlantic States than in their own home section. Perhaps the numbers are too large for them to read or to comprehend; but the children can at least feel: "If it takes so much food to feed us, how much more it must take to feed all the people in New York City and the Middle Atlantic States!" Thus, a study of population numbers in the text, motivates a question vital enough to require an answer: "What food do they eat, and do they obtain enough?"

USING PICTURE AND MAP MATERIAL OF THE TEXT TO SOLVE THE PROBLEM

The pictures in the text are the first help in answering the questions. There are pictures, perhaps, of fruit orchards and truck farms, cows in pasture, grain elevators, and ships in port from distant countries. The children study the four or five pictures, and tell from them the foods that are produced in the Middle Atlantic States, and the probable foods that come in by boat or road from distant places. From the pictures they can also tell something about how these foods are produced, for the pictures show prosperous conditions in level lands, plentiful crops, careful work.

We next use the maps in the text: the physical map to show the level farm lands and the hilly pasture lands; the roads from farms to cities; we use the rainfall map to show that the farms have enough rain; the wind map to show how the rain is brought;

we read the latitude and interpret the growing season map to show that there is enough warmth.

The children have used the pictures to answer, "What do they eat?" and "How is the food obtained?" They have used the maps to answer the question "Where does the food come from?" They have used both pictures and maps to draw their own inferences as to "Why can enough be obtained?" And so they have answered the motivation question.

So far the children have used the pictures and maps only. They have gathered data, made comparisons and inferences and drawn conclusions, using only the index, picture and map material in the text. They now read the text to verify their findings: "Is it true that the climate is mild enough for fruit trees to grow?"; or to extend their information, "What else have they to eat?"

THE USE OF THE PRINTED PAGE OF THE TEXT

In this lesson the teacher is merely the children's guide; the text is their most important tool of learning, and the most important part of the text is the collection of visual aids that the children can analyze in answering worth while questions. The printed words of the text are of only secondary importance, for with the guidance of the teacher there are few facts which cannot be obtained, few inferences which cannot be drawn by the children themselves from the concrete, visual material without their being told by either the teacher or the text.

Of course, the printed matter of the intermediate grade geography text is important. It gives a summary of facts and conclusions which the children may have already discovered, and thus verifies or corrects conclusions; it extends information, answering such questions as, "What else do the farmers raise?", "What other cities buy their crops?" The printed matter also gives a visual impression of oral statements so necessary to the eye-minded child, and thus furnishes another channel for receiving impressions; it forms a permanent record of facts that the children may use in review and drill after the class period is over. But still the fact remains: the visual material of the geography text, pictures, maps, charts, tables, grafs, enable the child to gather his data and make his inferences independently; the printed words often furnish only a summary and extension of data and inferences.

THE "LABORATORY METHOD" AS A MODERN TREND IN THE USE OF THE TEXT

Trained teachers of experience have a background of personal or vicarious experience reaching back over the field of geographic education for a period of perhaps one hundred years; besides, they are familiar with the trends of modern education. They are endowed, therefore, with the spirit of prophecy. This then is a prophecy made in the light of our past experience and of our knowledge of present trends: very soon, intermediate grade geography will be taught as is elementary science. There will be a geography laboratory and a geography laboratory manual. Intermediate grade children will use the scientific method of learning—a simple inductive thought process involving the collection of data from experience and observation, and the inferential formation of generalizations after a comparison of data. The exercises in the manual will consist of large questions to be answered or of statements to be proved; of a collection of pictures, maps, and other visual material to be observed and analyzed, with directions for study. Each child will keep a notebook for the recording of facts observed and conclusions inferred. And the intermediate grade geography teacher will be a laboratory guide to place before the children the material they need and to lead them to observe and to discover for themselves.

Thru this laboratory method the geography teacher and the geography text will satisfy one of the most insistent needs of education: to teach children how to study.

SOUTH AMERICAN PLACE NAMES

GLENN BARR
Miami University, Oxford, Ohio

Explorers often give the place they discover a name suggested to them by some striking feature of that particular landscape. Occasionally they name the site after a certain locality in their homeland, after a friend, a patron, a saint, or some special day. Perhaps they retain the name given by the aborigines, or adapt one therefrom.

South American names are largely Spanish or Portuguese. When translated into English they often convey a definite impression of the site, or of an event or personality associated with some particular occasion. Others are Indian, many of which have no definite meaning. Still others are only anglicized forms of Spanish words, not literal translations.

Cape Horn is a typical illustration of the latter case. The Spanish name is Cabo de Hornos, meaning "cape of the ovens," not horns, and was probably applied to the cape because of the numerous outdoor ovens used there by the Indians. Similarly the Rio de la Plata suggested the shorter name, River Plate, even tho the Spanish name means "a river of silver."[1]

ARGENTINE PLACE NAMES

Solis, the discoverer of the Plate estuary, named it Mar Dulce, meaning fresh water sea. This was occasioned by his surprise at finding so much fresh water forming a part of the ocean, not realizing that it was the mouth of a large river. Later, Sebastian Cabot on ascending the river and exploring its drainage basin, changed the name to Rio de la Plata. This change seemed pertinent because of his discovery of Indians with implements and utensils of silver believed to be derived from silver mines in the region.

Argentina is the Spanish adjective meaning "silver." Under the Spanish rule this area was known as the Provincias de la Plata, that is the Provinces of the Silver River. The poet Barco de Centenera wrote a poem about these provinces which he called "La Ar-

[1] Compendio de Historia de América, Diego Barros Arana, Buenos Aires, 1918, p. 208.

gentina'' because of the name Plata. This name, Argentina, was later adopted by the founders of the republic.[2] It is the Silver Republic on the River of Silver. There is a popular explanation for the name Rio de la Plata in Argentina and Uruguay. Altho the water of the river is muddy and brownish, the sun is believed to make a more brilliant reflexion here than on any other water, hence the name Silver River. The author can vouch for the extreme brilliancy of the reflexion, but whether it is more brilliant than any other is a matter of opinion. Similarly, the air of Buenos Aires, Spanish for ''good airs,'' so impressed the first settlers that one is supposed to have said: ''Que buenos aires son los de esta tierra,'' meaning, how good are the airs of this land.[3]

Some other Argentine place names and their origin are as follows: Rosario is Spanish for ''Rosary,'' Bahia Blanca for ''White Bay.'' Patagonia means a ''country of big feet,'' supposedly due to the belief that the Indians of this area were of enormous stature and had big feet.[4] Tierra del Fuego, Spanish for ''land of fire,'' was suggested by the many fires used by the natives. Lake Nahuel Huapi is an Indian name, meaning ''white tiger.''[5] Cordoba was named after the city of Cordoba in Southern Spain, and Mendoza was named for its founder, Garcia Hurtado de Mendoza, who crossed the Andes from Chile to found it. Pampa is an Indian word meaning ''extensive plain or prairie.''[6]

Bolivian, Brazilian, and Chilean Place Names

Bolivia was named in honor of Simon Bolivar, the great liberator and statesman of northern South America.[7] Following Bolivia's last battle for independence, the name, La Paz, meaning ''peace'' was conferred upon its chief city.

Brazil was first called Vera Cruz (true cross) and Santa Cruz (holy cross). Later the name adopted was Brazil, derived from ''brasa'' (brazil wood), found in abundance there.[8]

The Amazon is supposed to have derived its name from the fact

[2] Arana, op. cit., p. 270.

[3] Orestes Araújo, Nueva Historia del Uruguay, Montevideo. 1917, p. 123.

[4] Arana, op. cit., p. 107.

[5] Ciro Bayo, Vocabulario de provincialismos argentinos y bolivianos; Revue Hispanique, Vol. 14 (1906), p. 430.

[6] Idem., p. 446.

[7] Arana, op. cit., p. 287.

[8] Elzear Santiago Giuffra, Nociones de Geografía General, Montevideo, 1919, p. 61.

that the explorers of the river are supposed to have discovered along its banks some villages populated only by women.[9] This fact may have influenced the name tho there is some doubt of the fact that there were women warriors or amazons.

The names of Brazil's three largest cities are derived from their dates of discovery. Thus the bay on which Rio is located was entered on January first. The discoverer, thinking he had entered the mouth of a river, named the site after the day, Rio de Janeiro. So, too, Sao Paulo, founded on St. Paul's day, derived its name from its day of founding, as did Santos (Todos los Santos) from All Saints Day, and Ascuncion, Paraguay, from Assumption Day.

The word Chile is supposed to be derived from an Indian word meaning "cold," suggested by the perpetual snow on the mountains. Santiago, Spanish for St. James, honors the patron saint of Spain. Valdivia commemorates the first colonizer in Chile, and Valparaiso, Spanish for Vale of Paradise, is named after a city in Spain.

There are various meanings and derivations for the name Andes. In Prescott's Conquest of Peru, Volume I, p. 37, there is a footnote referring to the writings of a native Peruvian, educated in Spain, in which the word "anta" meaning "copper" is given as the derivation of the word Andes. Another derivation is suggested by the fact that the Spaniards gave the name "anden" (a place to walk) to the terraced farms of the Incas. Some people believe that this word gave us the word Andes. This is highly improbable, however, as the name Andes existed before the Spanish conquest. The derivation generally accepted is from the word "anti," the name of a tribe of Indians which meant "beyond the mountains."[10]

Other Illustrations

Colombia was named in honor of Columbus who explored part of the coast in 1502. Its principal river, the Magdalena, is Spanish for Magdalene.

Ecuador is the Spanish version of equator. Its capital, Quito, was well established before the Spanish conquest and so it was given the Indian name meaning "province or Kingdom."[11]

Rivers are often featured in South American names. Thus Paraguay was named after the Paraguay River, an Indian word

[9] Ciro Bayo, op. cit., p. 264.
[10] Orestes Araújo, op. cit., p. 132.
[11] Ciro Bayo, op. cit., p. 488.

supposed to mean "river of flowers," and Parana in Indian means "great river."[12] Peru comes from the Indian name of a river, the Piru, the meaning of which is unknown.[13] Lima comes from the word Rimac, the Indian name of the river on which it is built.[14] It was first, however, called the City of Kings.

Cuzco, the capital of the Inca Empire, retained its Indian name, meaning "center."[15] So did Lake Titicaca, meaning "head of a jaguar," from the resemblance that one of the islands in the lake bears to a jaguar head.[16] Evidently, the birds of the Uruguay River impressed its first explorers for it retained the Indian name, meaning "river of birds."[17] On the other hand it was a hill that impressed Magellan, who, sailing into the harbor where Montevideo now stands, named the site, Monte-Vidi, meaning "I see a hill." Actually there is a hill some five hundred feet high which dominates the bay and stands out prominently against the comparative flatness of the surrounding territory.[18]

The first settlements of Venezuela were made on the islands at the mouth of the Orinoco River. The similarity of this site to that of Venice, Italy, led some romantic person to name the site, Venezuela, Spanish for "little Venice."[19] Orinoco in Indian is supposed to mean "coiled serpent."

CONCLUSION

These are but a few of the common place names of South America. An analytical study of the others is often equally significant in giving the keynote of the history or geography of the place.

[12] Orestes Araújo, op. cit., p. 46.
[13] Ciro Bayo, op. cit., p. 463.
[14] Idem, p. 399.
[15] Idem, p. 331.
[16] Belisario Diaz Romero, Prehistoria Americana, La Paz, 1920, p. 85.
[17] Orestes Araújo, op. cit., p. 135.
[18] Idem, p. 34.
[19] Elzear Santiago Giuffra, op. cit., p. 148.

THE WORCESTER MEETING, NATIONAL COUNCIL OF GEOGRAPHY TEACHERS

Altho the weather was somewhat inclement, the hospitality of the staff of the department of geography at Clark University in looking to the detailed needs of the convention made the meeting an unqualified success and a most enjoyable and profitable occasion.

The convention opened Friday afternoon with an address of welcome by President W. W. Atwood, in which he spoke of the rapid gains made by geography and the esteem with which it is regarded in both public school and college.

From the papers that were presented at this session, the following points stand out as significant contributions. Miss Forsythe said that a study of the home region needs little justification, for it serves as a sound foundation for later work. It includes a study of the local geographic environment as an objective basis in the interpretation of those activities of the people that are within the child's own experience. Mrs. Hart emphasized the importance of journey geography as exemplified in a study of simple environments. She said this was an adaptation and refinement of the type study with special reference to the abilities and needs of fourth grade children.

Mr. Huntington said that most of the farmers of the world live in villages. He described typical village life in various latitudes from the banana village of Central Africa to farmer villages of Finland. Mr. Walther's plea for more and better measurement of achievement was a significant contribution which teachers of geography will do well to consider. Mr. Reeder said that there were three next steps in geography. First, the geographic personality of each region studied must be emphasized; second, the subject must be increasingly humanized; and third, more of fascinating detail needs to be incorporated into the work. This contribution at the close of the forenoon session was a fitting climax to a series of excellent contributions, pointed toward the improvement of geography in the elementary school.

The program Friday evening included two papers on high school geography, and four of a general nature. Mr. Ekblaw's description of human adjustments in the fiords of Norway emphasized how closely the activities of a people may correlate with the natural

environment. Mr. de Hass called attention to the fact that geography as a regional study could not consider the problems of international commercial relations without making such studies interregional. By doing this, however, geography then reaches the climax of its value, namely, that of better international, inter-racial and inter-regional understanding.

Miss Murphy's study of geography in the German schools emphasize the great stress that is placed on the *heimatkunde*—the core of the German elementary school curriculum. The *heimatkunde* is an elementary environmental study of the home region.

A beautiful New England snowstorm greeted the geographers on Saturday morning. The Centralized Lesson as presented by Miss Ware aims at a way of escape from the old "learning the textbook" method. She said that most good teachers use this plan without knowing it. Mr. Diehl advocated an extensive use of the local region in the introductory course in teachers colleges. In this way only can prospective teachers acquire the technique of teaching the home region to their children.

Mr. Howe presented an objective study which showed that directions are not as well taught in schools as we have been led to suppose. Dr. Albert Perry Brigham entered a strong plea for a more careful study of the physical environment—particularly simple physical geography—as a sound basis for geographic interpretation. Miss Thrall's contributions centered around four basic criteria for the selection and organization of subject-matter in geography for the use of children. Map-psychology, as presented by Mr. Eldredge, shows that most of the value of maps to children is lost because teachers do not know how to use maps except for factual study.

During the past two or three years the teachers colleges in New Jersey have been working on new curricula. Miss Huntting presented an outline of the tentative course in geography—a joint product of the geography teachers in these institutions.

On Saturday afternoon Miss Grassmuck discussed the desirability and possibilities of a department of geography in the National Education Association and in the Department of Superintendents and Principals. Mr. Wolfanger explained that today it is recognized that soil quality and evolution is more closely allied to climate than it is to geology. This renders obsolete much of the material in the soil surveys of the past.

Mr. Brook's address on meteorolgy and climatology emphasized particularly local studies and why everyone should be able to do a little amateur forecasting.

Mr. Lobeck indicated that physiography as a subject for special study belongs in the college, because it demands a mature intellect and is highly disciplinary in character.

Mr. Parkins told of the organization and activities of the committee charged with the responsibility of collecting and organizing materials for the Geography Yearbook, sponsored jointly by the National Society for the Study of Education and the National Council of Geography Teachers.

The address of Dr. C. B. Fawcett, of the University of London, on The English Lowland, following the annual dinner on Saturday evening, was a fitting climax to a most excellent and profitable convention. The masterly presentation of the regional geography of the English Lowland with its far-flung influences in world affairs stands as a challenge to American geographers, both as to insight and essential quality of good geographic interpretation.

The annual meeting of the Board of Directors and Executive Committee followed the dinner.

BUSINESS SESSIONS

The annual meeting of the National Council of Geography Teachers was held at Clark University, Worcester, Massachusetts, December 26 and 27, 1930. The following business was transacted at the meetings of the Board of Directors and Executive Committee.

1. The Nominating Committee, consisting of Robert M. Brown and George F. Howe presented its report and the following officers were elected:
   President, D. C. Ridgley, Clark University, Worcester, Mass.
   First Vice-President, Zoe A. Thralls, University of Pittsburgh, Pittsburgh, Pa.
   Second Vice-President, George J. Miller, State Teachers College, Mankato, Minn.
   Secretary, E. E. Lackey, University of Nebraska, Lincoln, Neb.
   Treasurer, C. E. Cooper, Ohio University, Athens, Ohio.
   Members of Executive Committee, terms to expire in 1934: DeForest Stull, Teachers College, New York City; R. H. Whitbeck, University of Wisconsin, Madison; Erna Grassmuck, State Teachers College, Indiana, Pa.
   Board of Directors at Large: M. E. Branon, Harris Teachers College, St. Louis, Mo.; Fred J. Breeze, North Side High School, Fort Wayne, Ind.; C. E. Cooper, Ohio University, Athens, Ohio; Erna Grassmuck, State Teachers College, Indiana, Pa.; Claire Symonds, Senior High School, Quincy, Illinois; A. W. Abrams, State Department of Education, Albany, N.Y.

2. Resolutions endorsing the move to celebrate the 200th anniversary of the birth of George Washington were approved.
3. A motion asking the Executive Committee to consider meeting next year where reduced transportation rates might be secured was passed.
4. The consideration of distinguished service award was placed in the hands of the Executive Committee with request for a report at the next annual meeting.
5. The report of the Committee on Trust Fund and Life Membership presented by D. C. Ridgley for R. H. Whitbeck was approved. The report called for a Research-Finance Committee to be composed of the treasurer of the National Council of Geography Teachers, one member to serve six years, and one to serve three years. Accordingly, R. H. Whitbeck was appointed to serve six years and R. M. Brown three years.
6. The report of the Committee on Economic Geography for senior high schools was referred back to the Committee with recommendations for reorganization and refinement with request for a report at a later date.

The Committee on Resolutions, consisting of Floyd F. Cunningham, Erna Grassmuck and Cora P. Sletten, presented the following report:

Resolved: That the National Council of Geography Teachers expresses its sincere appreciation to President Atwood, his staff, and those associated with them for the delightful hospitality and numerous courtesies extended the Council at the Annual Meeting held at Clark University, December 26 and 27.

Resolved: That the Secretary send greetings to Miss Ellen C. Semple, and convey to her the Council's profound realization of the loss of that fine inspiration which her attendance at past meetings always created.

Resolved: That the Council commends the President, DeForest Stull, and other officers of the Council for the well balanced program of this meeting, and thanks the speakers who contributed to its high professional status.

Resolved: That the Council extends a vote of thanks to the editor of the JOURNAL, Geo. J. Miller, and his associates, and to the A. J. Nystrom & Company, for their untiring efforts in promoting the professional and financial growth of the JOURNAL OF GEOGRAPHY.

Resolved: That the Council lend active support to the Steering Committee which is cooperating with the National Society for the Study of Education in the preparation of the Society's 1933 Yearbook.

E. E. LACKEY, *Secretary*

THE DROUGHT OF 1930

The last annual report of the United States Weather Bureau contains a summary of the facts of the drought occurring in a very large part of the United States during the past summer. A record of the drought to the end of August is included in the report. In many respects the drought of the past year was the most widespread and most complete that has been recorded in the climatological history of the United States. Not until the records for the remainder of the year are compiled will the full story of the drought and its effects be known.

"By the first of September the drought had continued for nine months in the Middle Atlantic area, six months over the Ohio and middle Mississippi Valleys, and for shorter periods in nearly all other sections east of the Rocky Mountains. The Middle Atlantic area was dry during the winter season. In March the drought extended westward over the Ohio and middle Mississippi Valleys, and thence in other directions as the season progressed.

"For the spring months, March to May, West Virginia, Kentucky, Indiana, Illinois, and Missouri had the least precipitation of record, with the average for the group only 57 per cent of normal, while the Middle Atlantic area had only slightly more than 60 per cent. In June, the Ohio and lower Mississippi Valleys suffered most, while by July deficiencies in precipitation extended to all states east of the Rocky Mountains, except New England and Georgia. In July 18 states had only 20 to 50 per cent of normal rainfall, with an average of 39 per cent. In August the drought continued in nearly all sections and was greatly intensified in some northern and southeastern states not theretofore seriously effected.

"For the summer, June to August, a belt of States extending from Maryland and Virginia southwestward to the lower Mississippi Valley established new rainfall records for the season, while in a group of 16 states, including Pennsylvania, Maryland, Virginia, West Virginia, Tennessee, Kentucky, Ohio, Michigan, Indiana, Illinois, Missouri, Oklahoma, Arkansas, Texas, Louisiana, and Mississippi, the average precipitation was only 54 per cent of normal. *Not a single state east of the Rocky Mountains had as much as normal precipitation for this period of the three principal growing months, and some half dozen states had less than half the normal.* The summer season was generally warm, with the period from

about the middle of July to middle of August having abnormally high temperatures, with the previous maximum records equalled or exceeded in many places. These unusually high temperatures greatly intensified the effect of the deficient moisture.

"July and August combined brought the driest weather of record to Pennsylvania, Maryland, Virginia, West Virginia, Kentucky, Missouri, and Arkansas, with an average for these seven states of only 41 per cent of normal. The growing season, as a whole, March to August, was the driest of record over a large area, comprising the Middle Atlantic States and the Ohio and middle Mississippi Valleys."

The following table shows the deficiency in rainfall for each state and portrays the spread of the drought as the season progressed. "For example, in January, only three states that continued dry thereafter had deficient precipitation, while for March the number had increased to 9; May to 10; June to 19; and July to 30. It will be noted that South Dakota and Nebraska had more than normal rainfall in August, hence there were only two consecutive months with deficiencies.

DEFICIENCIES IN PRECIPITATION, IN PERCENTAGES OF NORMAL, FOR THE DROUGHT OF 1930, BY STATES AND MONTHS, FOR THE PERIOD CONTINUOUSLY BELOW NORMAL. FIGURES IN ITALICS SHOW THE GREATEST DEFICIENCIES OF RECORD FOR THE RESPECTIVE MONTHS

	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Number of Months	Average Monthly deficiency
Maryland and Delaware	..27	18	30	42	26	38	15	*64*	*76*	9	37
Virginia	34	18	52	44	33	36	26	*62*	*65*	9	41
West Virginia	..26	49	17	16	45	46	*36*	*59*	45	9	38
Missouri	.....		19	53	47	28	22	76	44	7	41
Kentucky	.....			53	68	30	*55*	*70*	39	6	52
Ohio	.....			18	34	53	42	*62*	28	6	40
Indiana	.....			54	26	55	32	47	36	6	42
Illinois	.....			53	21	55	13	*70*	41	6	42
North Dakota	..			*89*	14	19	11	58	33	6	37
Alabama	.....				65	5	53	26	22	5	34
Montana	.....					41	43	35	7	4	32
Arkansas	.....						*79*	*80*	32	3	64
Tennessee	.....						*68*	46	38	3	51

	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Number of Months	Average Monthly deficiency
Mississippi							*87*	50	27	3	55
Louisiana							*88*	39	14	3	47
Texas							36	58	43	3	46
Oklahoma							3	68	40	3	37
Kansas							5	41	10	3	19
Minnesota							5	29	67	3	34
Iowa								61	29	2	45
Wisconsin								30	*67*	2	48
Michigan								54	73	2	64
Pennsylvania								50	66	2	58
New Jersey								13	29	2	21
New York								23	36	2	30
North Carolina								38	49	2	44
South Carolina								18	61	2	40
Florida								*40*	39	2	40
Georgia								—	63	1	—
Nebraska*							16	56	47	2	—
South Dakota*							26	53	31	2	—

*August above normal.

The effect of such a drought on human affairs was widespread. Partial crop failures occurred over large areas and in some sections the crop failure was practically complete. Many of the small streams in the Missouri Basin were dry, and in the remainder of the drought effected area small streams were as low as they have ever been in August or very close to the low record. Hydroelectric plants on the smaller streams were forced to either shut down or draw heavily on their reserve, and sewage disposal became acute in numerous places. Navigation on the smaller streams, or rather upon those of which water levels are not controlled, was either impossible or seriously interrupted. Many wells failed completely and the supply of water available from others was restricted very greatly. Providing water for livestock became a very difficult problem.

EDITOR

INTEREST-STIMULATING DEVICES

Geographers tend now to stress the teaching of geographical relationships and geographical interpretations. These, however, cannot be taught successfully without a thoro knowledge of geographical facts. The facts must be drilled upon because their thoro knowledge is increasingly essential, since they are now used as tools in further thinking. A considerable amount of work will have to be done outside of the classroom, at home, thru the interest of the children.

I have found the following devices stimulative to interest in getting facts:

I. Learning State Names, Spelling, Abbreviations, and Capitals.

Give each child a large map of the United States. Let him paste it on tag board and cut it to make a puzzle. Have the children put it in a box or envelope, and let them take the puzzle home. (It is taken for granted that each home has a map of the United States.) Give the children as an incentive a statement like this: "In two weeks bring your puzzle to school. We'll see how many children can put the United States together."

Have a chart in the room on which you may record by means of stars the children's accomplishments.

In two weeks check up and follow with the statement, "By the (date) of (month) I will place numbers in each state on the blank wall map. You will place after each corresponding number on your paper the name of each state. Only correct spelling will be checked."

As we all know, children love to play games. You will find that quite frequently a history, geography, language or reading lesson ends a few minutes before the specified time or perhaps it is a rainy day and the children must have indoor recess. All these minutes can be used to good advantage. Divide the class into two teams. Print on cards the names of all the states in the United States. Make two sets. Divide each set among the children in the separate teams, so that each child has two or three cards. Place two blank wall maps on the wall. Call out the name of a state. The child in each team having that card will go to the blank wall map and hold it on the proper state. Keep the score of each group. The children see a use to which they can put their knowledge (even though it is a game) and learn the names of the states. Later the same may be done with the abbreviations and state capitals. The children love to watch their progress on the chart and ask for chances to write the states, abbreviations, or write the capitals.

II. Geographical Facts

If the children have had pretests, interval check-up tests, and final check-up tests for each topic they will be able to review their work at home and consequently greatly enjoy a few minutes of this:

Twin Cities in Minnesota.....
Chief wheat growing valley.....
Chief iron ore mining range.....
Chief iron and steel manufacturing city.....
Kind of labor used on sugar plantations.....
Oyster fishing bay.....
Valley important agriculturally due to irrigation.....
Locks between Lakes Superior and Huron.....
Weight of a bale of cotton.....
Chief coal mining center.....
State ranking first in dairy products.....
City at Junction of Mississippi and Missouri Rivers.....

All the children need to do is to put on the paper after the number of each statement the word which satisfies.

For these scores, keep a chart also. A review over all work from the beginning of the semester may thus be given at intervals of two or three weeks.

III. Temperature and Rainfall

Range of temperature and annual rainfall are two facts which appear in many geographical topics. To stimulate interest in geography as a whole and particularly to make temperature real, represent the outside temperature grafically on engineers profile paper. (This paper may be purchased by the yard at book stores.)

Have a thermometer outside on the window frame, so that it may be read daily. Assign to a group of four children the work of recording the temperatures for a week. The children enjoy the work greatly as soon as they notice the average change in temperature from one season to the next.

These devices and others similar to these have made the children in my 5B class ask for an extra lesson in geography whenever they wish to have an exceptionally good time.

MONICA H. KUSCH,
Charles Dickens School, Cleveland, Ohio

NOTICE

Please send your devices to the Editor. We will be pleased to publish more plans that have been found to be helpful. Do not hesitate to send in your devices on the assumption that other people have already sent in theirs, and that yours will be of no value. These devices are proving of great interest to many teachers, and we would like to have a large number on file. Please write your directions so that they are sufficiently definite for another teacher to follow accurately.

GEOGRAPHICAL PUBLICATION

John E. Orchard. **Japan's Economic Position.** 489 pp.; Maps, ills., bibliogr., index. McGraw-Hill, New York, 1930. $5.00

This book ranks with Scott's "Foundations of Japan" as the outstanding contributions in English to the economics of Japan. The author has undertaken a problem of vast scope and complexity and has accomplished his ambition well. Particularly valuable is the assemblage of material which is widely scattered and unavailable to many interested in Japan. Chief among these sources should be mentioned the excellent Transactions of the Asiatic Society of Japan and the varied publications in English of the different government bureaus. To this comprehensive collection and analysis of materials is added the keen observations and broad knowledge of the author.

In any study so debatable, as that of Japan's future position in the sun, there are bound to be possible conflicts in points of view and in conclusions. One might even question whether geography is the chief motif of the book. Likewise, certain omissions are bound to occur. For example, the author should have mentioned the very important position of Manchurian soy bean fertilizer in modern Japanese agriculture. Similarly, the fact that more Koreans are now in Japan than are Japanese in Chosen would add much to the discussion on Chosen as a place for Japanese migration. The traditional occupation of the "eta" is tanning and leather work, to be sure, but the making of gaitas and general agriculture are of equal importance, in the past as at present. In Niigata, the inability to produce a winter crop is given as the sole reason for the migration of people from it and no mention is made of the equally important fact of absentee landlords and the exploitation of the tenants.

Somewhat disappointing is the lack of any comprehensive description of the geographic setting. The use of the prefecture as the smallest unit in map making, where data by gun and mura are available, is not entirely satisfying.

In the main, however, the book is excellent. The author first sets out the chief economic problems of Japan. These are to maintain and strengthen itself as a world power and to solve its difficult population problem. The possible solutions, especially of the latter problem, are considered—migration, increase in agricultural production, diet changes, etc. Industrialization is then considered and a discussion of its history, present situation and future possibilities occupy most of the book.

Thruout a concise and interesting account of the history of each problem is given and the present situation is well illustrated by statistical data.

The illustrations are excellent and the completeness of the index adds to the value as a reference book. In no other book can be found such a complete and up-to-date summary of Japan's resources, industries and economic problems.

After reading this book, the student of Japan is more than ever convinced that the only solution of the population problem lies in the control of the rate of increase and that this control must be established in the not distant future.

University of Michigan R. B. HALL